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#9/52 21402 PCT

RAW SEQUENCE LISTING

DATE: 05/29/2001

PATENT APPLICATION: US/09/700,354A

TIME: 16:13:36

Input Set : A:\SeqList for IRVN-007CIP2.txt

Output Set: C:\CRF3\05292001\I700354A.raw

ENTERED

SEQUENCE LISTING

5 (1) GENERAL INFORMATION:
7 (i) APPLICANT: Gatanaga, Tetsuya
8 Granger, Gale A.
10 (ii) TITLE OF INVENTION: Factors Altering Tumor Necrosis
11 Factor Receptor Releasing Enzyme Activity.
13 (iii) NUMBER OF SEQUENCES: 154
15 (iv) CORRESPONDENCE ADDRESS:
16 (A) ADDRESSEE: BOZICEVIC, FIELD, & FRANCIS, LLP
17 (B) STREET: 200 MIDDLEFIELD ROAD, #200
18 (C) CITY: Menlo Park
19 (D) STATE: CA
20 (E) COUNTRY: USA
21 (F) ZIP: 94025
23 (v) COMPUTER READABLE FORM:
24 (A) MEDIUM TYPE: Diskette
25 (B) COMPUTER: IBM Compatible
26 (C) OPERATING SYSTEM: Windows
27 (D) SOFTWARE: FastSEQ for Windows Version 2.0b
29 (vi) CURRENT APPLICATION DATA:
C--> 30 (A) APPLICATION NUMBER: US/09/700,354A
C--> 31 (B) FILING DATE: 17-Apr-2001
32 (C) CLASSIFICATION:
34 (vii) PRIOR APPLICATION DATA:
35 (A) APPLICATION NUMBER: 09/081,385
36 (B) FILING DATE: 14-MAY-1998
38 (A) APPLICATION NUMBER: PCT/US99/10793
39 (B) FILING DATE: 14-MAY-1999
42 (viii) ATTORNEY/AGENT INFORMATION:
43 (A) NAME: Francis, Carol L.
44 (B) REGISTRATION NUMBER: 36,513
45 (C) REFERENCE/DOCKET NUMBER: IRVN-007CIP2
47 (ix) TELECOMMUNICATION INFORMATION:
48 (A) TELEPHONE: 650-327-3400
49 (B) TELEFAX: 650-327-3231
50 (C) TELEX:
53 (2) INFORMATION FOR SEQ ID NO: 1:
55 (i) SEQUENCE CHARACTERISTICS:
56 (A) LENGTH: 4047 base pairs
57 (B) TYPE: nucleic acid
58 (C) STRANDEDNESS: double
59 (D) TOPOLOGY: linear
61 (ii) MOLECULE TYPE: Genomic DNA
63 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
65 AAGCTTTTGT CTTTCCTTCC CCGGGAAAGG CCGGGGCCAG AGACCCGCAC TCGGACCAGG 60
66 CGGGGGCTGC GGGGCCAGAG TGGGCTGGGG AGGGCTGGGA GGGCGTCTGG GGCCGGCTCC 120
67 TCCAGGCTGG GGGCCGCCAG CTCCGGGAAG GCAGTCCTGG CCTGCGGATG GGGCCGCGCG 180

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68	TGGGGCCCGG	CGGGGCGGCC	TCGGGAGGCG	TCCAGGCTGC	GGGAGCGGGA	GGAGCGGCCG	240
69	TGCGGGCGCC	AGCGCCGTGG	GTGGAGGTGC	CCGTCCCTCC	TGAGGGGCAG	CCAGTGC GTT	300
70	TGGGACCCGG	GAGCAGAGCC	CGCGCCTCCC	CAGCGGCCTC	CCCGGGGGTC	TCACCGGGTC	360
71	ACCCGAGAGC	GGAGGCCCCG	GCTCCGCAGA	AACCCGGGGC	GGCCGCGGGG	AAGCAGCGCC	420
72	CTCAGGCGTC	GGAGGAGCCC	CCAGAAGGAC	CTCGCGCCTT	CCCGCCGGGC	TCCGACCGCC	480
73	TGGGTTTCGGT	GCGGGACGGC	CCAGGCCGCC	AGGACCCCCA	AGCGCAGCTC	AGTCTGCGGG	540
74	GCACGACCCA	GAGGCCAGCA	GCAGAGGACG	GGGCCGGGGC	CGGGAGAGGG	CGGGGAGGGC	600
75	GCTCCTGGGA	GGTCAAGGCC	AGGGCTAGAC	TTTCAGGGTC	ATGGCCTGGC	CCCTCATCCC	660
76	CAGGGAGGTG	AGGGGGCTCT	GTGAGCAGAG	GGGGCCCCGG	TGGAGAAGGC	GCTGCTAGCC	720
77	AGGGGCGGGG	CAGGAGCCCA	GGTGGGGACT	TAAGGGTGGC	TGAAGGGACC	CTCAGGCTGC	780
78	AGGGATAGGG	AGGGAAGCTA	GGGGTGTGGC	TTGGGGAGGT	GCTGGGGGAC	CGCGGGCGCC	840
79	CTTTATTCTG	AAGCCGAATG	TGCTGCCGGA	GTCCCCAGTG	ACCTAGAAAT	CCATTTCAAG	900
80	ATTTTCAGGA	GTTTCAGGTG	GAGACAAAGG	CCAGGCCCAG	GTGAAAATGT	GGCAGTGACA	960
81	GAGTATGGGG	TGAGAACCAC	GGAGAGAGGA	AGTCCCCGAG	GCGGATGATG	GGACAGAGAG	1020
82	CGGGGACCAG	AATTTTTTAA	AACGCATCTG	AGATGCGTTT	GGCAGACTCA	TAGTTGTTTT	1080
83	CCTTTCACGG	AGAAAGTGTG	GGCAGAAGCC	AGCTCTAAAG	CCCAGGCTGC	CCAGCCTGCA	1140
84	CTGGCAGAGC	TGACGGAAGG	CCAGGGCAGA	GCCTTCCCTC	CCTGTCACAG	ACATGAGCCC	1200
85	TGGAGATCTG	GAATGAGGCA	GATGTGCCCA	GGGAAAGCTG	ATCCGCCCCG	ACCCAGGGCC	1260
86	CCCCGGGTGC	CCCTTTGAGC	GTGGAATCGT	TGCCAGGTCA	TGGCTCCCTG	CTATCGAACA	1320
87	CCGGACACGG	GTCGTGTGCT	GCACCTGGCA	GTTGCAGGAC	CGACACCCAC	AATGCCTTAA	1380
88	GAGGTGATGA	CTGCCTTCCA	GGGGCTATGG	TCCGTGACAC	TTTGATGGC	TCCTGGAGAA	1440
89	GAGGGATTGA	GTGGAGTCCA	CGGGCTATGG	CCACGTCTCG	GGTGCTGCCT	CTGAGGAGG	1500
90	CCCCGGCTGG	GGTGAGAAGG	GGGTGGAGAC	AGGTTCTCTG	CAGTTCAGCC	TCTAACCGGT	1560
91	GGTCTTCATG	CCTAGGAACC	CACTGGGGGC	TTATGAAACT	GCAGGTGGCT	GAGTCCTTGC	1620
92	CATGGGGTCT	CTCCTTCAGG	AGGTCTGGGT	GGGGCCGGAG	ACTGTACCCC	ACAAAGGGTC	1680
93	CCAGGTGAGG	CGGATGTGGC	CTGGCGCTGT	GTGGCTCTGG	ACCTAGTCCT	TGGGCTTGGG	1740
94	CTGGCGCCCA	GGGCCTGGGC	TTGAGACAGC	TGTGACGCAG	GCAAGCCATT	TACCCCGTTT	1800
95	GTGGGGACAT	TACATCTTCC	TAGCTTGGA	CACACAGGCA	GCCAGGGTTG	TTATCCACAT	1860
96	TCCTCCTCCA	TGTTCTTCTC	TTGAGAACTT	TTACCAGGTA	TGTCAGGAGC	TGGGCTCCAC	1920
97	CAGGGAGACT	CAAGTGAAA	GCCCTCATCC	TTGTCTCCA	GGAGACAGGA	AAACCTATGG	1980
98	TTACAATTCC	AGGGACAAGA	GCGATGCATG	TGAGGTGTGG	CAAATCTCAC	TGTTCAACTG	2040
99	GAGAAATCAG	AGACAGCTTC	CTGGAGGCAG	TGACACCTGG	ACAGGCTTCT	CCACAGGAGG	2100
100	AAGCGAGTGA	GAGAAGCCAA	CTGGGATGGA	CCCATCATGT	AGGGGGAACA	GTGCGCGCAG	2160
101	AACCAACAAC	CACCCCCACC	CTAGGCCCAG	AGCTCACGGA	GAGAGCTGGG	CCTCTCGGGG	2220
102	TGACTACATA	GTTCCCTGCT	GGATCTTAGG	TCTTGTCTCT	GGGCAGCTCT	GCTGAGACCT	2280
103	CTATGCCTGT	TCCAGGCTGC	ACCAAGGTTT	TGTGACTATT	GGTCTGGGGT	TGTTTTGCAG	2340
104	CAACTGAAGT	GTTCTGTTGT	AAAACAGGCA	CTTGATTTCG	TGGAAGGAAT	GCTGTTTGT	2400
105	CTTGCTGCGA	CAACATTGA	GCAGCATTTA	GTGGGCGGTT	TATATCTTGT	GGAGTAATGG	2460
106	GTGTTTTTGA	AGTCTGTCCT	GGGTACTGCA	CATTAAAAGG	AATATCATTT	TCTGAAACAT	2520
107	TGCTATTTTC	CACACCAGAA	ATCATATCCT	CTTGCTGGTC	CATGTCTGAA	GACCTTACAC	2580
108	GAGAAAGTCT	TAATGTAAGT	TTAGTAGAGT	CCTTGGATGG	AGAATAATT	ATATCATACA	2640
109	TTGCCGCTTT	CTCACTCTGC	TCTTTTTTCAT	CCTTGCTTAA	TTTCATTTTC	TTCTGCTTCT	2700
110	TTTGTTTTCT	TTCTGGAGAA	TCTAGCAAGA	TATCTGGTGG	AACATCTCGA	GGTGATGAAC	2760
111	AAGGTAGAGA	CTGAGATTGT	AGGATTAAAG	GTGGTCTTGA	GCCTTTAGGA	GTTCTTCAC	2820
112	TTCCAGCAGG	GGAGCATACT	GGCTGTGGAG	ATCTCAAGGG	AAAAGATGCA	GCATTCTCA	2880
113	TTGTTGAAGA	ATCTCCATCG	TCACTACTTA	GCCTGTGCAC	CATGTGTAGG	TAGTCCTCAC	2940
114	TTGAACCATG	TCTAGGATTA	TCAGCATGAT	GATTAGCTGA	ATTGCCAGAC	AACGGACCAG	3000
115	AAACTTTATT	ATCATGTATG	TTTCTCAAAC	CACCTGCAAC	AATGGGACTT	GATACCGATG	3060
116	CTTGTTGCAT	CTGTGGATGT	GTTGTGTAAC	TTGAAGGATG	GGAATATGGC	ATGTATCCTG	3120

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117 CAGGGCTTTG TGGGGCGTAT GGAAGTAGGCA CTGGGCTATT TTGCTGTGGC ATAAATCTGT 3180
118 TCCCAGAGCT TGTCTGTGGT GGCACAAACC GGCTGGAGGG GCTATGTGAG ATAGTGGTTT 3240
119 GTTGATAATT GGAAGATGCA GGACTACTGT GCATGGAATT CTGAGAAAGT TTATACTGAG 3300
120 ACATCATCAT TCCACTTTGT ACATATCTGT TCTGCATGCT TTTCTCCCTG AAAACATTAG 3360
121 GACTCCTTGC CAGGACGGCC TGCAACAAGA CTGGTATGTC ACCTTCTGGG TCATCACTGC 3420
122 CAAGGTTATC TTTCAACTCT ATGTGATCTG TTGATACCTG GTTGAGGCTA TGGACAAGCT 3480
123 GTGAAACCAA ATTGTCATCC CTACAAGCCA AAAGGCAGTT CACCTCTTCT GCTATTTCGTG 3540
124 CATTAAAGAG AAGGCTCTTT GTAGTTGTAG CAGGTAAAGG AGATGGAAGA GGCAGCTGGT 3600
125 TCAGGAGGTC TGTGAGACTA GCAATCCCCG CAAGAGTAGT AATGGGGACA TGGGGCATAT 3660
126 CCCCATTCTT CCTGAATTTT TGGGAATGGT TTGCCTATAA AAGTACTTAG TTCAGGTGCC 3720
127 AGCTGTCATT ACTTCCCATT TCCCAAACAC TGGGCGAATC GGCGTCTGAA TCCAAGGGGA 3780
128 GGCCGAGGCC GCTGTGGCGA GAGACTATAA TCCGGGCCGG GAGGGGGGGC GGCTACGGCT 3840
129 CCTCTTCCGT CTCCTCAGTG CGGGGAACAT GTAGAGCCGG GGGGAGACCA GCCGAGAAGA 3900
130 CAAATCGTTG CTTCTTCTTC CTCCTCCTCC TCCTTCTCCC ACATAGAAAC ACTCACAAAC 3960
131 ACCCGACCAC GGGCCCGAGC TACCGGGGGG GCATCGCCGC GGGCCCGGGA ACCAATTCTC 4020
132 CTGTCGGCGG GGGCGTCCTT TGGATCC 4047
134 (2) INFORMATION FOR SEQ ID NO: 2:
136 (i) SEQUENCE CHARACTERISTICS:
137 (A) LENGTH: 739 base pairs
138 (B) TYPE: nucleic acid
139 (C) STRANDEDNESS: double
140 (D) TOPOLOGY: linear
142 (ii) MOLECULE TYPE: Genomic DNA
144 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
146 GGATCCAAAG GTCAAACCTCC CCACCTGGCA CTGTCCCCGG AGCGGGTCGC GCCCGGCCGG 60
147 CGCGCGGCCG GGCGCTTGGC GCCAGAAGCG AGAGCCCCTC GGGGCTCGCC CCCCCGCCTC 120
148 ACCGGGTCAG TGAAAAAACG ATCAGAGTAG TGGTATTTCA CCGGCGGCCG GCAGGGCCGG 180
149 CGGACCCCGC CCGGGGCCCC TCGCGGGGAC ACCGGGGGGG CGCCGGGGGC CTCCCACTTA 240
150 TTCTACACCT CTCATGTCTC TTCACCGTGC CAGACTAGAG TCAAGCTCAA CAGGGTCTTC 300
151 TTTCCCCGCT GATTCCGCCA AGCCCGTTCC CTTGGCTGTG GTTTCGCTGG ATAGTAGGTA 360
152 GGGACAGTGG GAATCTCGTT CATCCATTCA TGCGCGTCAC TAATTAGATG ACGAGGCATT 420
153 TGGCTACCTT AAGAGAGTCA TAGTTACTCC CGCCGTTTAC CCGCGCTTCA TTGAATTTCT 480
154 TCACTTTGAC ATTCAGAGCA CTGGGCAGAA ATCACATCGC GTCAACACCC GCCGCGGGCC 540
155 TTCGCGATGC TTTGTTTTAA TTAAACAGTC GGATTTCCCT GGTCCGCACC AGTTCTAAGT 600
156 CGGCTGCTAG GCGCCGGCCG AAGCGAGGCG CCGCGCGGAA CCGCGGCCCC CGGGGCGGAC 660
157 CCGCGGGGGG GACCGGGCCG CGGCCCTCC GCCGCCTGCC GCCGCGGCCG CCGCCGCGCG 720
158 CCGAAGAAGA AGGGGGAAA 739
160 (2) INFORMATION FOR SEQ ID NO: 3:
162 (i) SEQUENCE CHARACTERISTICS:
163 (A) LENGTH: 233 base pairs
164 (B) TYPE: nucleic acid
165 (C) STRANDEDNESS: double
166 (D) TOPOLOGY: linear
168 (ii) MOLECULE TYPE: Genomic DNA
170 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
172 CAAGAGTGGC GGCCGCAGCA GGCCCCCGG GTGCCCCGGG CCCCCTCGAG GGGGACAGTG 60
173 CCCCCGCCGC GGGGGCCCCG CGGCGGGCCG CCGCCGGCCC CTGCCGCCCC GACCCTTCTC 120
174 CCCCCGCCGC CGCCCCACG CGGCGCTCCC CCGGGGAGGG GGGAGGACGG GGAGCGGGGG 180
175 AGAGAGAGAG AGAGAGAGGG CGCGGGGTGG CTCGTGCCGA ATTCAAAAAG CTT 233

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Input Set : A:\SeqList for IRVN-007CIP2.txt

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177 (2) INFORMATION FOR SEQ ID NO: 4:

179 (i) SEQUENCE CHARACTERISTICS:

180 (A) LENGTH: 2998 base pairs

181 (B) TYPE: nucleic acid

182 (C) STRANDEDNESS: double

183 (D) TOPOLOGY: linear

185 (ii) MOLECULE TYPE: Genomic DNA

187 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

189	GGATCCAAAG AATTCCGGCAC GAGGTAGTCA CGGCTCTTGT CATTGTTGTA CTTGACGTTG	60
190	AGGCTGGTGA GCTTGGAAAA GTCGATGCGC AGCGTGCAGC AGGCGTTGTA GATGTTCTGC	120
191	CCGTCCAGCG ACAGCTTGGC GTGCTGGGCG CTCACGGGGT CCGCATACTG CAGCAGGGCC	180
192	TGGAAGTGGT TGTTCTTGGT GAAGGTGATG ATCTTCAACA CTGTGCCGAA CTTGGAGAAA	240
193	ATCTGGTGCA GCACATCCAG GGTACACAGG TAGAAGAGGT TCTCCACGAT GATCCTGAGC	300
194	ACGGGGCTCT GCCCGGCCAT CGCCATCCCT GCATCCACGG CCGCCGCCGA GGCAGCCAAG	360
195	GCCAGGTTCC CCGACTGGAC CGAGTTCACG GCCTGCAGGG CCGCCTGGGC CCGCGCCTGG	420
196	TTGGGAGAGC TGTCGGTCTT CAGCTCCTTG TGGTTGGAGA ACTGGATGTA GATGGGCTGG	480
197	CCGCGCAGCA CAGGGGTCAC CGAGGTGTAG TAGTTCACCA TGGTATTGGC AGCCTCCTCC	540
198	GTGTTTCATCT CGATGAAGGC CTGGTTTTTC CCCTTCAGCA TCAGGAGGTT GGTGACCTTC	600
199	CCAAAGGGCA GCCCCAGGGA GATGACTTCC CCCTCCGTGA CGTCGATGGG GAGCTTCCGG	660
200	ATGTGGATCA CTCTAGAGGG GACGCCTGCA CTTCGGCTGT CACCTTTGAA CTTCTTGCTG	720
201	TCATTTCCGT TTGCTGCAGA AGCCGAGTTG CTGCTCATGA TAAACGGTCC GTTAGTGACA	780
202	CAAGTAGAGA AAAGCTCGTC AGATCCCCGC TTTGTACCAA CGGCTATATC TGGGACAATG	840
203	CCGTCCATGG CACACAGAGC AGACCCGCGG GGGACGGAGT GGAGGCGCCG GAATCCTGGA	900
204	GCTAGAGCTG CAGATTGAGT TGCTGCGTGA GACGAAGCGC AAGTATGAGA GTGTCCTGCA	960
205	GCTGGGCGCG GCACTGACAG CCCACCTCTA CAGCCTGCTG CAGACCCAGC ATGCACTGGG	1020
206	TGATGCCTTT GCTGACCTCA GCCAGAAGTC CCCAGAGCTT CAGGAGGAAT TTGGCTACAA	1080
207	TGCAGAGACA CAGAAACTAC TATGCAAGAA TGGGGAACG CTGCTAGGAG CCGTGAACCT	1140
208	CTTTGTCTCT AGCATCAACA CATTGGTCAC CAAGACCATG GAAGACACGC TCATGACTGT	1200
209	GAAACAGTAT GAGGCTGCCA GGCTGGAATA TGATGCCTAC CGAACAGACT TAGAGGAGCT	1260
210	GAGTCTAGGC CCCCAGGATG CAGGGACACG TGGTCGACTT GAGAGTGCCC AGGCCACTTT	1320
211	CCAGGCCCAT CGGGACAAGT ATGAGAAGCT GCGGGGAGAT GTGGCCATCA AGCTCAAGTT	1380
212	CCTGGAAGAA AACAAGATCA AGGTGATGCA CAAGCAGCTG CTGCTCTTCC ACAATGCTGT	1440
213	GTCCGCCTAC TTTGCTGGGA ACCAGAAACA GCTGGAGCAG ACCCTGCAGC AGTTCACAT	1500
214	CAAGCTGCGG CCTCCAGGAG CTGAGAAACC CTCCTGGCTA GAGGAGCAGT GAGCTGCTCC	1560
215	CAGCCCAACT TGGCTATCAA GAAAGACATT GGGAAGGGCA GCCCCAGGGT GTGGGAGATT	1620
216	GGACATGGTA CATCCTTTGT CACTTGCCCT CTGGCTTGGG CTCCTTTTTC TGGCTGGGGC	1680
217	CTGACACCAG TTTTGCCAC ATTGCTATGG TGGGAAGAGG GCCTGGAGGC CCAGAAGTTG	1740
218	CTGCCCTGTC TATCTTCCTG GCCACAGGGC TTCATTCCCA GATCTTTTCC TTCCACTTCA	1800
219	CAGCCAACGG CTATGACAAA ACCACTCCCT TGCCAATGGC ATCACTCTTC AGGCTGGGGT	1860
220	GTGCTCCCTG ACCAATGACA GAGCCTGAAA ATGCCCTGTC AGCCAATGGC AGCTCTTCTC	1920
221	GGACTCCCCT GGGCCAATGA TGTTGCGTCT AATACCCTTT GTCTCTCCTC TATGCGTGCC	1980
222	CATTGCAGAG AAGGGGACTG GGACCAAAGG GGTGGGGATA ATGGGGAGCC CCATTGCTGG	2040
223	CCTTGCATCT GAATAGGCCT ACCCTCACCA TTTATTCACT AATACATTTT ATTTGTGTTT	2100
224	TCTAATTTAA AATTACCTTT TCATCTTGCT TGATTTTCTT TCAGCTAAAT TAGAAATTTG	2160
225	TAGTTTTTCC CTAATAAAAT TCAATGGCAT TCTTTCTTAT AAATTACATT CTCTGATTTT	2220
226	CTTGTCAGCC TGCTTCAAGG AAATCCATGT GTTCAAAATG CTTGCTCGCA GTTTGCTCCA	2280
227	TACCAAATGG TTGCTTAACC CAAATATCTG AGCAGCAAAT TGAGCTGATC CTTCTGGAGA	2340
228	AAGTACGGTT GAACAGCCAA GACCACTGGG TAGTCGAAGA GAAGACCACA CATCCTGAAC	2400
229	TCCCCAGTCT GGTGTGAGGG GAGGACAGCT GATAACTGGA TATGCAGTGT TCCCAGACAT	2460

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230  CACTGGTCCC AAACCATTAC TTCTGCCTGC CACTGCCACA AATACAGTAG GAATGCCATC 2520
231  CCCTTCATAC TCAGCTTTAA TCCTCAGAGT TTCATCTGGT CCTTTATGCG CAGATGTTAC 2580
232  TCGAAGTTCA CATGGAATGC CAAAATTTCC ACAGGCCTTC TTGATTTTTT CACAGTGACC 2640
233  AAGATCAGAA GTAGAGCCCA TCAACACTAC AACCCTGCAC TGACTTTCTG ATTTCAAAAG 2700
234  CAACTCTACT CTCTCTGCAA CCCACTCAAA GTTTTCTTTT ACCATTTGGA GCCCTTCAGG 2760
235  AGTTACTTCT TTGAGGTCCC GATAAGACTG TTTGTCTTTC TGTGGGCTTC GATCTCCTGA 2820
236  TGGCCAGAGT CTCCAGGAAT CATTGTCAAT AACATCAGCA AGAACAATTT CTTTGGTGGT 2880
237  TACATCAACA CCAAATTCOA TCTTCATATC AACCAGTGTA CAATTCTGGG GCAACCAGGA 2940
238  TTTCTCCAGT ATTTCAAATA TAGCCTGTGT AGCATCTCGT GCCGAATTCA AAAAGCTT 2998
240  (2) INFORMATION FOR SEQ ID NO: 5:
242      (i) SEQUENCE CHARACTERISTICS:
243          (A) LENGTH: 4152 base pairs
244          (B) TYPE: nucleic acid
245          (C) STRANDEDNESS: double
246          (D) TOPOLOGY: linear
248      (ii) MOLECULE TYPE: Genomic DNA
250      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
252  AAGCTTTTTG TGAAAACCCT AGGATATGTC CCCTCCCTCA CCACACCCAA CCCCCCGCCC 60
253  CTGCCCCAGG ACATGACGAT GCCTCACACA CACACACACA CACACATACA CACAAGGCCG 120
254  TGAGCTGCAC GCAGGAACAT GGGCTGCACT CAGGACAACA TTGAAAAAAT ATACATTATA 180
255  TATGTACACG CGGGGCCCCC ACGTCCCCTC CCGTCCCCGC AGCCTGGCCA CACCAGGTCA 240
256  CGGAGGAGGG GCCGGGGCTG CAGGACCTCA GGACTGCAAG GGCAGGAAGG GAAACAGGAC 300
257  AAGAAAGGAA GGAAGTTGGA AAGGAGGGAG AAATGGGGTC CCCAGACTGA AATGGAAATG 360
258  AGGTGGGGCG ATCATAAGAG AAGCAGGGAC GATGGTCCAG CTGAGGGAGC CCTGCAGAGG 420
259  GGGAAAAGCT TCCCATGGAC AGGAGAGAGA AGGGAAGGGG AGAGGAGAGG GTTTCCTTCA 480
260  ATCCACCCCC CAGCCCCAGC CCCAGCCCCA GCCATTGCAA TCGTCACCCT CTCCCCAACA 540
261  CAGTGAGTGC TAAGGGGGCA GCTGCCATTG GGGGTAGAAA GGCAGCTGAA GTCCAGCCCA 600
262  CTTTCCAACC CAGCCAGCCC CAGTGCAAGG GGCACACCAG GAGCATGACA GCCCAGAAGT 660
263  GAGGGATGGG GGGCCGGGGG AGGGGCAGGG CGGACTCCAG AGGGCCCGCT GGGGTTTTGA 720
264  AATGAAAGGA GGACTGGTTC TGAAGCCTCT CTCCCTCTTG GTCTCTGTGT TCCAGAAAG 780
265  TCCTTCTCCC ATGTCTGGAG TGTCTGTTTC ACCAGGGCAG AATTCCCCCCT CTGCGTGGGG 840
266  AGAGGTGTAG GCCTTAGTAG CGGTGTGGGG GGGTCTCGAT GATGCGTCTC TCGTCGCTGC 900
267  TGGGGGAATC GGCCACCTCC GAGTCACTGC TGTCTCATC CTCTGCTGG CCCCCAACAG 960
268  CCCCCGTCAC ACAGGACTGC CGATTCTGGT AGGACTCCAT GGGGTTCACA ATGATGGTGA 1020
269  GAGCTGAGTC ATCCCAGAAG AGGTCCTGGT CTTGGGGTC ACTGGAGGCC CCTGGAGGCC 1080
270  CGCCGGCCCC TGAGACGCGG CGGTGAAGGG AATGGATGCG CACCAGGCCC AGGACGACCA 1140
271  TGAGCACCAG GAAGCCCACG CACACCACAA TGATGAGGGT TCGGGCGCTG GGTATCATGG 1200
272  AGTTTCTGTG GGAGCTGGCT AGGCTGTGTC CAGCCATCTC AGGCGGGGGC TGGTGACCAC 1260
273  GGTGCAGGAA CTGCTGGGAG CTGAGCAGCT GGCTGGGGTG GGCAACCCGG TTCATGCTGT 1320
274  GCAGGACATT GACCTCCACG ATGAATTCAT TGCTGGAGTA ACGGCCATTC ATTTCCGAGC 1380
275  AGGAAAGCCG GAACTTCCTG GTGTAGAGGG CAGCTCCGTG TCGCAGCCGA TAACGAGCCT 1440
276  GCCTCAGGAT CTCTTCATAC ACAGTGATGC TCTCCACCCC AGCAATAGTG AGGTAGGCAG 1500
277  ATGTGTTGGT GAGCTCCAGC CCCCCTGCTG GCAGAGAGGT TGTGTCCAGG AGCAGGCTTT 1560
278  CCCGCTCGGG ATCCAGGTCA TCCCCACCA GAGAAATTTT ACAGCCATCC AGGTTGTGCA 1620
279  CAATCTCATC CGACATGCGT GTGTCTGTCA CTGTGCCCTG CCAACTCTCA TCCTTTTTTG 1680
280  CCTCCACCTG GTGAGAAATG GAGCAGGTGA TTTGAAGATC AGGGAACAAA GGGACGCCGT 1740
281  TGGTTCCCTC AAAGTCCACA GCTGGGCGGG CAAAATGAGC AGTGCCACTC AGCAGGATCT 1800
282  GGGGGGCGTC AGGCTGAAGG ACGACCACGT AGCCCTCCAC TTCAGGGATG GAGACGCAGG 1860
283  ACTCTTCGCT GAAGCACTTG ACAGCAGTGG TGAGGCGCAG GGGCCTGACG CCGGGCGTGG 1920

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VERIFICATION SUMMARY

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L:30 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]

L:31 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]

L:3225 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:154